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ABSTRACT

This report presents the proceedings of a conference for researchers and trainers of researchers, convened to discuss the issues involved in improving knowledge by finding better ways to permit cross-research analyses or longitudinal research analyses. Included are: (1) a description of the history, goals, and activities of the Interagency Panel on Early Childhood Research and Development and the Interagency Panel for Research and Development on Adolescence; (2) an address defining the need for comparability and generalizability in research and the problems involved; (3) summaries of the discussions of four separate conference workgroups; (4) post-conference reactions of some of the participants; (5) a brief description of the panels' conference followup activities; and (6) a short paper which summarizes the major recurring recommendations of workgroups from this conference and a preceding one. The paper suggests the organization of Research Progress Monitoring Groups, a tripartite structure of interrelated groups designed to translate policy questions into research questions and to attain answers to these questions as quickly as possible. (ED)

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PROCEEDINGS OF THE SECOND CONFERENCE ON COMPARABILITY IN RESEARCH

May 5 and 6, 1975

Sponsored by

The Interagency Panel on Early Childhood Research and Development

The Interagency Panel for Research and Development on Adolescence

Edited by:

Maure Hurt, Jr., Ph.D.
Thomas W. Hertz, Ph.D.

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As director of the project at the Social Research Group, I would like to take this opportunity to express my thanks to all those who contributed to the planning and organizing of the conference. Among these are Panel members who shared their time, skills and experience in the planning phases, as well as at the conference itself, especially the Chairperson of the Panels, Edith Grotberg; and also Social Research Group staff members who gave exceedingly careful attention to the myriad of details before, during, and after the conference, most notably Helen Somerville and Judy Miller, who were responsible for organizing the schedules, activities, facilities and accommodations, and for developing the materials for the Proceedings.

Maure Hurt, Jr.

Maure Hurt, Jr., Ph.D.
Social Research Group

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WELCOME AND OPENING REMARKS

Edith H. Grotberg, Ph.D., Chairperson
Interagency Panel on Early Childhood Research and Development

We are delighted you could attend this Second Conference on Comparability of Research. The first one was held in November and editors of the leading behavioral science and medical science journals attended. They discussed some of the same issues you will be discussing today and tomorrow, but they examined the issues from the point of view of editors, while you will do it from the perspective of researchers and trainers of researchers. We are holding the Conferences because we need help in improving the cumulativeness of knowledge through finding better ways to permit cross-research analyses or longitudinal research analyses. We feel you can help us here at the Federal Agency and Department levels and we trust we can help you as you grapple with problems of cumulative knowledge. But let me give you a quick historical sketch of who we are and what we wish to accomplish to improve research data for cumulative knowledge. We must begin with the establishment of the two Interagency Panels.

The Interagency Panel on Early Childhood Research and Development was established in 1970 as a result of the Secretary of the Department of Health, Education, and Welfare requesting one of the Agencies within the Department, the Office of Child Development, to take the lead in achieving greater coordination among Agencies of research effort concerning children. What prompted this request was the increased evidence that Agencies frequently duplicated research, overlapped research or ignored important gaps in research. The Director of the Office of Child Development called together representatives of various Agencies within the Department who supported research on children.

After a series of meetings and a good deal of discussion on structure, the Panel format was accepted. This structure assured the legislative and mission autonomy of each member Agency while providing a vehicle through which to promote the coordination of research planning and utilization. The Panel was not to be a superordinate structure, but rather a point at which Agencies could meet for agreed upon activities. The Office of Child Development established an Information Secretariat, the head of which became Chairperson for the Panel. By 1972, the Secretary of the Department of Health, Education, and Welfare, upon the request of the Panel, invited other Departments to send representatives as new members to the Panel. The Department of Labor, the United States Department of Agriculture, and the Department of Housing and Urban Development responded to the invitation, and became members.

In 1972, also, a second Panel was established to address the problems of research concerning adolescence. Research staff from several Agencies who knew about the work of the Interagency Panel on Early Childhood Research and Development felt the need for similar kinds of work to solve similar kinds of problems relating to research on adolescence. The Director of the Office of Child Development asked the Secretary of DHEW to invite Agencies and Departments to designate representatives to an Interagency Panel for Research and Development on Adolescence. The same Agencies and Departments responded but now designating a representative who specialized in research planning and development on adolescence. The first meeting was convened by the Chairperson of the Early Childhood Panel and the new Panel decided to adopt the organizational structure of the Early Childhood Panel as well as sharing the staff, the resources, and the Chairperson.

The two Panels have developed an Information System which contains information on each research project funded by member Agencies. This information includes

all on-going research as well as new starts and is updated annually. The information provides the basis for an Annual Report. Each year a report is published containing descriptions and analyses of current research funding activities of the Panels' member Agencies. The report includes charts and narrative, comparing what the Agencies are supporting in research. Other sections of the Annual Report address the problems of identifying needs and gaps in research as well as determing where overlaps and duplications occur.

The Panels frequently hold special interest meetings relating to an area of research in which many of the member Agencies have interest or are able by legislation to address. Outstanding researchers present papers at these meetings and Panel members interact with the invited researchers as well as among themselves. From these meetings the member Agencies draw ideas for interagency coordination of research planning and support. Follow-up meetings invite only those Agencies interested in coordination in the specific research area. Some of the special interest meetings have addressed the following areas of research: (1) home-based programs; (2) longitudional/intervention research; (3) work experiences; (4) the family; and (5) marker variables and marker measures.

In addition to coordination of research planning and support through the device of special interest meetings, the Panel members share the current and forward plans of their Agencies. These plans are included in the Annual Reports and are analyzed in terms of the foci of the various Agencies. From these current and forward plans the member Agencies are able to determine where they may wish to coordinate their research on an interagency basis.

Not only do Agencies wish to use their resources well in terms of supporting research where needs are most critical and where unnecessary duplication

and overlapping are avoided, but they also want to be certain the research findings are usable. Research findings may be usable for application to problems, for program development, for services, but a critical use of research findings is to compare them with findings from other research. Cross-research and cumulative research analyses are meaningful only if there are some bases for comparability; i.e., the various research studies are using comparable subjects, comparable definitions of variables, comparable measurement instruments. As any researcher knows, it is very easy and often more productive for the researcher's own purposes to describe and define and measure with new terms and new instruments created by the researcher. Probably the concern for imposing some limits on researchers' creativity accounts for the fact that few Agencies address the problem of comparability. The United States Department of Agriculture is the major Agency among Panel members which supports cooperative research, a kind of research requiring all researchers who participate to agree on common definitions and measures. But for individual research no Agencies, including USDA, require such agreements.

To address this problem the Panels established a special interest group on marker variables and marker measures. The problem is complex, as the Panels soon learned. Many meetings of the special interest group have surfaced the many aspects of the problem, and several meetings have been held with foundations and professional organizations, such as the American Psychological Association, the American Educational Research Association, to involve them in discussions of the problem. A sub-committee of the Panels drafted a statement which set some guidelines for Agencies as well as foundations and professional associations which may serve to promote valid cross-research and cumulative research analyses. These guidelines include requests for clearly stated definitions of population characteristics as well as an

inclusion of certain population characteristics, such as age, sex, ethnic identity, residence, etc. Some research does not need all of these population characteristics, but their inclusion permits other researchers to conduct comparative studies or analyses.

The meeting today and tomorrow is to address this problem of research comparability. We want a frank, open discussion and suggest that we break up this afternoon into smaller work groups so that everyone may speak. Each group is chaired by a member of one of the Panels and each group has a recorder. The recorders will work tonight and have summaries for us tomorrow morning so that each group may distribute and discuss with the entire group the deliberations. This is an important meeting for us and we hope it will be seen that way by you.

Richard Bell, whom most of you know, and who has just left NIMH for the University of Virginia, has been very crucial in helping the Panels work on the problem of cumulative knowledge, marker measures and marker variables. He will present to you a statement on the problem from a researcher's point of view. Dick.

THE NEED FOR COMPARABILITY IN RESEARCH

Richard Q. Bell, Ph.D.
The University of Virginia

My interest in this area of comparability and generalizability came from a variety of experiences including those of friends within and outside the Government. My personal experience came when I found myself in the position of defending behavioral science research before administrators at the National Institute of Health. Some of my friends had to go before Congressional committees to try to get money for research. Others in state universities or agencies had to go before legislatures to get funds for research. The experience common to all of us was frustration at our inability to point to clear-cut, well-agreed upon findings in areas that had received support for years.

One study from my experience further illustrates the problem. After a graduate student poured through the literature for him, the investigator summed up results in that area for a 10 year period, covering a large number of studies. Unfortunately what the review came up with has come to be known as "Berelson's findings." Berelson has caustically pointed out that research findings in the behavioral social sciences come down to this, typically: (1) the problem is more complicated than originally thought; (2) a larger sample is needed; and (3) more research is needed.

Obviously, these conclusions are not uniformly true across all areas of inquiry. There have been some areas of social science research in which giant strides have been made, in which changes have come very rapidly. In other areas we have moved glacially. Paradoxically it seems as though these are often the areas in which the public need is greatest. There are many reasons why this happens. Tom Hertz and I have been examining this phenomenon for

several months, and quite often it seems that there just haven't been any new ideas in a given field. Or, there haven't been any breakthroughs in instrument development, no new techniques, and so the field stagnates. Another contributing factor has to do with comparability and generalizability of findings coming out of completed studies. This is our major concern at present.

In the paper that Tom and I have written, we take the position that very often the problem is at the level of sample description and sampling. In some cases the samples aren't big enough, or don't represent populations to which one needs to generalize. Very often the problem is just at the level of sample description. For example, someone may be trying to do an article for the Psychological Review covering the last few years in an active research area. There are many studies, yet the results can't be added up. The main reason is that there isn't sufficient information to make it possible to say that the samples are similar or in what ways they differ.

Another problem seems to lie in the area of measurement. Very often researchers develop their own measures because that's a way to get points for being creative, not because the existing ones are inadequate. Then they neglect to use any measures that others have used in the past, so that the relationship of their work to that of others can be checked.

The other problem lies in the lack of collaboration. Even if there isn't a need for large-scale collaboration, some fields could benefit from small scale, more informal, and flexible kinds of collaboration. When people are aware of what others are doing they at least have the opportunity to align their methodology, instrumentation, or samples so as to assist comparability.

Unfortunately, at this time, no matter how one discusses comparability and generalizability, the spectre of Government control arises. Although Government control isn't advocated in our paper, and despite our best efforts to emphasize

that it isn't, some researchers will immediately see a threat to free research. I think there's an understandable reason for this "knee jerk" response. We're all sensitive right now, highly sensitive, to the central regulation of research because of the difficult issues involved in the protection of human subjects. So to write a paper that points to the need for researchers to work together and consider their cumulative impact is like throwing gasoline on a fire. Nonetheless, we think comparability and generalizability is an important area that needs to be discussed.

Central regulation is not just a problem of whether there is Federal regulation of research, but whether there is central direction from any source. It can occur from funding sources within the research community. It can also occur because there is a conformity within the community of researchers. Central regulation can be latent. I can say this to reassure you, that I'm sympathetic and equally concerned about central regulation, because in the in-house research program at NIMH I was also subject to it. The procedures that the former Bureau of the Budget had in effect tied me up on a research project for a year. If you had a questionnaire sent out to more than 10 or more subjects you had to send it up for clearance. It took at least a year trying to get a project approved that Earl Shaffer and I were doing, on parental attitudes. Thus, although I have been in the government for many years before going to the University of Virginia, I have had experiences similar to those outside the government.

As we looked over the literature for efforts to achieve better comparability and generalizability in research, Tom and I discovered that these efforts came about spontaneously by investigators in the field. In my own area of infant research, I remember Earl Lipton suggested years ago that we get together to try to develop a few measures that most of us could use, no matter how we did our

studies. Unfortunately, we never did get together.

Partly as a result of talking to people who have served on advisory groups to the Interagency Panels, and consultants, we have discovered that there have been quite a few efforts to do something about comparability, spontaneously developed by the investigators themselves. Their experiences are useful because, when you know what's been done in the past, you can get an idea of potential guidelines for the future. These guidelines can be based on what investigators themselves have decided needed to be done. In this case we are clearly not talking about something imposed by a government agency, but what investigators themselves feel that we need to do. For example, one of the efforts that we mentioned in the paper was the development of the "Upstart" group. The members of this group were all involved in early childhood intervention research, efforts to offset deficits in the environment of children who were disadvantaged. This group, with very little help, got together and decided on common protocols for recording sample characteristics.

Sam Messick told us about another group, in this case involved in factorial studies of various questionnaire measures of creativity. This group met several times, finally agreeing on sets of marker variables that were available to anybody carrying out factorial studies in any one of several areas. Kits were made available containing measures of these marker variables, making it very easy for people to use these measurement instruments. If an investigator were planning a study in a certain area of creativity, and he wanted to tap, for instance, factors X, Y, and Z, there were one or two measures that could be included to "mark" those factors.

Another example comes from the area of sleep research and, again, this was a spontaneous development. The investigators in this area were concerned about all the different criteria for stages of infant sleep--a very difficult

area of research. They got together to tackle the problem because they had been sensitized by exchanges at meetings which went something like this: "Well, I scored variable X this way," and another one said, "I measure it that way," and,"I included the transition periods," and, "Well, I don't use this measure and I didn't count the transition periods." They found out that they couldn't put the results together. Sleep research had evidently passed through a stage where the best thing to do is to just cut everybody loose and let them see what they can come up with in the way of criteria. Now it was time to get together. They developed specimen kits which are used by the members as guidelines. The quality of the specimen kits is good because the measures have been worked out by people who are quite knowledgeable in the area. That is, if you want to use them, O.K., if you don't, you don't have to. The individual investigator has to make up his own mind on how to do his research.

Now another point that is brought out in the paper is that comparability and generalizability are very specific to research in given areas. There are areas in which exactly the opposite is the problem, people have been doing the same thing for so long that the research has become stereotyped. They have been using the same paradigms, the same experimental procedures, and because of this they're not getting anywhere. By way of contrast, very often there is an area of research in which very few investigators are involved who are really at the leading edge of a new field, and just getting started. In this case it is difficult to see the direction that the research will take. There is no point in talking about comparability and generalizability in such areas.

Our main concern is areas in which there has been a lot of research and it hasn't added up too well. It may not have added up for many reasons, but one thing one can look for is whether there has been enough attention paid to comparability and generalizability. So we're very much talking about certain

areas and one kind of feedback that would be very helpful from the participants would be: What are the areas in which these concerns are appropriate. In which areas are they not pertinent? Comparability and generalizability are important to research policy, but not on a blanket basis. We need to address these issues in each individual research area.

SUMMARIES OF THE WORKGROUP DISCUSSIONS

WORKGROUP I

Participants in the Workgroup

David Pearl, Moderator
National Institute of Mental Health

Nina Beauchamp, Tuskegee Institute

John Bergan, University of Arizona

Yvonne Brackbill, University of Florida

Juarlyn Gaiter, National Institute of Child Health and Human Development

Lawrence E. Gary, Howard University

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Thomas Hertz, Social Research Group, The George Washington University

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Miriam Johnson, University of Oregon

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Kathleen White, Boston University

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WORKGROUP I
Summary of the Discussion

Moderator: David Pearl
National Institute of Mental Health

Before they discussed comparability in research and the accumulation of scientific knowledge, the participants in this workgroup focused on the current climate for research in the nation. There was agreement that Congress and the public are becoming increasingly skeptical about research activities and are demanding greater accountability in research. According to some participants, this growing disillusionment is aggravated by a general failure of scientists to communicate the outcome of their research to these non-scientific audiences. While researchers are usually trained well to write articles for scientific journals, most are neither able nor willing to write reports that are both clear and compelling to non-scientists. Steps in this direction will have to be undertaken, however, if the climate for research is to improve. Participants pointed out that without adequate funds for research, significant progress in solving scientific and social problems will be difficult to achieve, no matter what courses might be charted for the training of researchers and the practice of research.

Can researchers themselves be expected to report their findings clearly, promptly and effectively to the general public? The feeling among the discussants was that researchers should not be asked to take on this additional task. One suggestion which received considerable attention was that more science writers be trained to meet this need for liaison between the scientific and non-scientific communities. A few small pilot programs might be designed to train individuals to synthesize research findings, and then "translate" this scientific information into everyday language.

The discussion turned next to the need for improved dissemination of research findings and exchange of information within the research community proper. Many

of the participants expressed dissatisfaction in particular with current policies of research support which allow unpublished technical reports to be buried in agency filing cabinets, and long periods of time to elapse before the proceedings or reports of Federal meetings are made available to the research community.

Noting that problems associated with the process of reporting findings were of only peripheral importance if the findings themselves could not be meaningfully analyzed in the first place, the discussants shifted their attention from the issue of dissemination to the primary focus of the conference, comparability in research. There was general agreement that diversity in concepts, measures and methods often made it impossible to synthesize research findings from different studies even within a narrow sub-area of research. Participants complained that many areas are plagued by confusion because of differences in the way researchers define their terminology. While there are certainly newly developing areas where efforts to accelerate agreement on concepts might be premature, there are countless areas where agreement on definitional matters would be feasible and fruitful. Participants endorsed the suggestion that Federal agencies support more conferences or workshops where investigators working within a common substantive area could convene in order to exchange information and try to develop a common frame of reference.

In addressing themselves to specific mechanisms for increasing comparability, the discussants agreed that standardization of measures and techniques could be beneficial to a field, but warned that it should not be carried out to such an extent or in such an inflexible manner, that it routinizes research and discourages new theoretical developments. Comparability should be promoted so as not to discourage the continuous questioning of the concepts, measures and methods used in an area. This caution was thought to be particularly germane to the use of marker variables. The process of selecting specific marker

variables and measures, even within a narrowly circumscribed area of research, will be extremely difficult. Discussants argued that we will never reach the point where all researchers will be able to agree on which marker variables to measure in any one study, much less in a number of studies across an entire area, and over an indeterminate time period. For one thing, the appropriateness of a variable as a marker will derive in part from the particular theoretical approach favored by the researcher. Accordingly, the participants opposed any system of directly regulating comparability, and especially one that would impose a specific set of variables upon an area. On the other hand, while they felt that it was inadvisable to force investigators to adopt specific measures, they thought that it was reasonable to ask investigators to make an effort, in their own fashion, to clarify the relationship between their research terms, measures and techniques and those of other research projects which focus on similar problems. Specifically, researchers might be encouraged to select their own marker variables and measures, or to modify those selected by others as they deem it necessary. In this way, marker measures could be used to increase comparability within an area of research, yet because these measures would be altered or replaced as they are judged obsolete, irrelevant, or simply less informative than other measures, the area would continue to evolve freely, without undue standardization. Furthermore, even if it were not objectionable, on the grounds outlined above, to give the responsibility to a small group of experts, the task of determining the most effective measures to increase comparability in a continually changing area of research, would be inordinately difficult and time-consuming. The task might be more feasible, however, if it were left to the individual researcher to decide which marker measures to include. By explaining his reasons for selecting certain measures rather than others, each researcher would be contributing to a general theory of comparability and marker variables within that area.

Participants pointed out that as an area of research evolves, so too do the needs for information. A variable, such as eye color, may seem irrelevant to a particular research problem today, but turn out to be significant tomorrow. Can investigators be expected to predict future needs when they design their studies? One solution might be to over-report background information. This suggestion prompted some debate among the discussants concerning the extent to which an investigator could be expected to include "extra" information or variables beyond those that have immediate relevance. Some participants thought that over-reporting was preferable to under-reporting, and expressed their own willingness to collect any additional information, as long as they were funded accordingly, and the means for storing the resulting data were provided. Others said that they would not be willing to include variables which did not appear to have any real bearing on the processes being studied, and contended that the collection of information on a vast array of variables, selected on the chance that they may prove to be relevant someday, would impose an unreasonable burden on the researcher and constituted poor scientific procedure. The number of potentially relevant variables, it was argued, would be so large that this strategy would not be practical.

With regard to the question of how to store extensive background information, most participants took the position that there was no room in journal articles to include data which were not directly relevant to the study being reported, and that it was too costly and cumbersome for researchers themselves to store comprehensive background data, especially over long periods of time. The possibility of establishing data banks for marker variables was suggested.

A theme that recurred throughout the discussion was that there are many institutional arrangements and pressures within the research community which inadvertently discourage comparability in research and the synthesis of research

findings. Many kinds of research activities which are critical to the accumulation of scientific knowledge, such as reviews, replication studies, collaborative research, methodological research, and instrument development, have relatively little "pay-off" in terms of institutional rewards. At the time they are being trained, graduate students are pressed to be innovative and to undertake work on new research problems, not to replicate prior studies or build directly on the work of others. After graduate training is completed, the researcher is faced with new pressures which reinforce the same basic pattern. Since tenure decisions often are based more on the quantity of work accomplished than the quality or significance of the contribution, the system tends to discourage long-term, sequential, or collaborative studies.

According to one participant, developmental psychologists have been delinquent when it comes to validating their own instruments. In contrast to the early years of research on children, there is little interest in scaling, and too seldom do researchers carefully examine the properties of their tests and measures, even when they administer them to children in different age groups.

Toward the end of the session, the participants considered specific mechanisms that might be used to attain greater comparability in research. A cooperative research model employed by the USDA was described to the group. The USDA often brings together investigators from several universities who are interested in working on a common problem, and helps them plan their objectives. With this approach, data which is collected in different states or regions of the country can be meaningfully compared and sometimes even pooled. An interesting aspect of the strategy is that it allows for both comparability and flexibility. While the different groups may agree on certain aspects of design, methodology and sampling, a group might also pursue its own interests and apply its own kind of expertise in particular areas.

Returning to the topic of marker variables, the discussants concluded that the most appropriate way for the federal agencies to increase comparability in research is not through regulations or guidelines concerning the use of marker variables, but through support for conferences in which researchers working within common substantive areas could clarify and synthesize theoretical concepts, measures, and methods involved in their research. An agency representative pointed out that some Federal agencies are in fact responsive to suggestions from researchers for conferences in areas of concern to them. Participants complained that it was difficult for many researchers to find out what mechanisms already are available, and it was recommended that channels of communication between agencies and researchers be improved.

Literature reviews and state-of-the-art papers were endorsed as other means of making research more cumulative. Some participants cautioned, however, that an aimless explosion of such activities would be wasteful and unproductive, and that the need for such papers should be carefully weighed within each particular area of research.

Strong support was expressed for any steps that would improve the researcher's access to scientific reports and data. Several participants suggested the need for a computerized information storage and retrieval system which would be comprehensive (e.g., provide access to unpublished government reports and bibliographies as well as published documents), and readily available (and inexpensive) to the individual researcher. The better acquainted researchers are with the latest developments throughout their areas of interest, the easier it will be for them to build some potential for comparability into their research.

With regard to graduate training programs, participants saw need for change, but were not optimistic about the chances of altering practices which run counter to comparability and the synthesis of research findings. As one participant put

it, we train graduate students primarily to carry out research that will be publishable, and until the current system of rewards is changed, it is not realistic to expect graduate programs to change significantly. Nevertheless, it was argued that greater attention should be given by universities to the kind of problems raised in this conference, as they relate to training programs.

Finally, there was some discussion about the source of funds for activities intended to increase comparability in research. Unless new appropriations are sought, which most participants thought unlikely, any extra funds required will have to be diverted from some other areas or types of research activity. Several discussants stressed that decisions to implement efforts to increase comparability could not be made in the abstract, and that budgetary realities would have to be taken into consideration.

WORKGROUP II

Participants in the Workgroup

Richard Q. Bell, Moderator
University of Virginia

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Sarah Broman, National Institute of Neurological and Communicative Disorders and Stroke

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Paul Jehlik, Department of Agriculture

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Ronald Ouellet, Social Research Group, The George Washington University

Janet E. Redfield, University of Denver

Victoria Seitz, Yale University

WORKGROUP II
Summary of the Discussion

Moderator: Richard Q. Bell
University of Virginia

As the session began, participants acknowledged that there was a definite need for increased comparability in research. Providing examples from their own areas of interest, they pointed out that the continual development of new concepts, definitions, measures, and techniques makes it difficult to synthesize findings from different studies. There was considerable give and take concerning the means by which this situation might be improved. General support was expressed for the use of marker variables as a strategy of increasing comparability. Participants thought that, given appropriate funding, many researchers might be willing to include background measures that would relate their studies to other studies focused on the same general problems, even if these measures were irrelevant to their own hypotheses.

Although the marker variable strategy was not questioned, some felt that the actual task of selecting demographic and marker variables could present a dilemma for researchers. Ideally, in order for researchers to select the particular variables that will best enable research studies to be tied together, they would have to identify variables that would be relevant to future conceptualizations of the research problem. After all, as most areas of research have evolved investigators have discovered that, in order to understand the processes being studied, they have had to consider factors which previously had been ignored completely. For instance, in many areas of research, data from subjects of both sexes has always been pooled. Investigators then discover that there were in fact significant sex differences in performance on experimental tasks. Clearly there is no way for researchers to foresee future developments. One way to help researchers select the most effective marker variables

might be to enable them to meet periodically to assess progress in a particular area of research, and to identify new directions or promising approaches and measures.

Along the same lines, participants pointed out that in some areas differences in the way researchers conceptualized their problems and defined their terms were so great that any attempt to increase comparability through the use of marker variables would be premature. The first priority in such areas should be to bring researchers together to clear up the conceptual "underbrush".

Questions about the role of the Federal agencies in efforts to increase comparability prompted discussion about priorities in research support. Participants wondered whether agencies would encourage increased comparability across the board, or would concentrate on a few high priority areas. Similarly, there was some debate as to whether the use of marker variables would be encouraged primarily in research that was applied or had social policy implications. Although one participant contended that in evaluating large scale intervention programs it was especially crucial to be able to compare different studies, the group concluded that there was a need for comparability in basic research as well as applied research.

While on the topic of agency priorities and plans, discussants suggested that fragmentation of research effort stems in part from the researcher's lack of information about agency priorities, and recommended more effective communication of agency goals and interests to researchers in the field. Another aspect of this topic concerned the manner in which agencies formulated and pursued their research goals. The present system, participants suggested, discouraged comprehensive and cohesive programs of research. It was argued that grants were awarded most often to investigators who undertake new and different kinds of research, as opposed to replications, cooperative projects, or studies that

tie in closely with prior work or other ongoing work. Some participants hypothesized that a systems approach to research might be the logical implication of Federal interest in comparability and cumulative research. With this approach, more commonly applied to the physical sciences, problems most in need of solution would be defined, and for each problem possible hypotheses would be identified. Different groups would systematically attack these hypotheses, proceeding to others as some were eliminated. It was commented that this model of research had not been as successful as had been hoped on the few occasions that it had been applied to the social sciences. No consensus was reached on the advantages or disadvantages of this kind of coordinated research.

The group listened to a description of a model of regional and national planning used by the USDA, wherein researchers and administrators from the agricultural experiment stations get together to examine problems in agriculture and rural life, to evaluate research and the knowledge it produces, and to point out directions for future research. The USDA often uses panels of investigators, who are themselves drawn from the experiment stations, to review the program of a particular experiment station.

The description of the USDA panel-review system sparked a discussion about the feasibility of instituting a system of panels that would address pressing problems in early childhood and adolescence research. The following general proposal for such a system emerged from the various comments and recommendations. The panels could be comprised of experts in the field, who could monitor particular areas of research on children and youth in order to evaluate research progress, identify problems in need of attention, and recommend how to distribute efforts in order to increase comparability and to make research more cumulative. The primary function of the panels would be to help researchers come up with answers in areas in which there is pressing

public need. One primary task would be to clear up any confusion caused by differences between concepts, definitions, and measures used in particular areas. It would be the panel's responsibility to see that all relevant lines of research were showing progress, whether this involved basic research, applied research, conferences, or reviews and syntheses of the literature. Thus the panels would help to fill in the kind of gaps in our present research system that have been identified in both of the Interagency Panels' conferences on comparability. Presently, this function of adding up the pattern of research is "falling between the cracks", with no one element of the research community capable of taking it on. For instance, editors of journals cannot be asked to play this role; they do not have access to all studies in an area, and, at any rate, the task of assessing comparability and progress in a general area would be overwhelmingly time-consuming for a small group of individuals. By concentrating on the overall picture of research and the long range implications of work in an area, the panels could provide researchers with information and help that is not available from other sources, such as the researcher's colleagues.

The panels might be supported by foundations and Federal agencies, but it was suggested that the members might be appointed independently of these institutions, perhaps by professional societies. Members should be drawn from many disciplines, and from all sectors of the research community, including the Federal agencies. While the membership of the panels could be rotated in order to assure the steady influx of fresh ideas, terms could be staggered to provide continuity in the panels' activities. One participant cautioned that with the broad interdisciplinary scope of the panels, special efforts would have to be made to keep the panels task oriented and to prevent them from turning into ineffective bureaucracies. The discussants considered the question

as to whether such panels might tend to become conservative and have a dampening effect on the development of novel ideas. Most agreed that the panel approach might encourage conformity to some extent, as does any form of peer review, but since the panels' role would be to advise and not coerce researchers, the discussants concluded that the advantages would outweigh the disadvantages.

The next topic considered by the group was graduate training. How can graduate programs more effectively sensitize young researchers to the problems of comparability and cumulative research? It was recommended that more opportunities be created for graduate students to spend a year as interns in Federal research agencies, in order to learn about the whole range of problems and issues that relate to the synthesis of research at the national level, and to the interface between research and policy.

A major problem, according to participants, is that the topics of comparability and the selection of measures simply receive short shrift in most graduate programs. The ability to design research that is cumulative derives not so much from specific technical skills, it was felt, as from a general sensitivity to what is going on in the field as a whole. Even if specific methods to increase comparability cannot be taught directly, however, at least a better feel for problems involved in synthesizing and comparing studies could be imparted to students through courses and textbooks. A good way to help students become more sophisticated in the selection of marker variables might be to write an historical textbook that specializes in "critical incidents" in which the course of research in various areas was altered when a previously ignored variable was discovered to be relevant to the processes under investigation. Also, reports analyzing the comparability of measures in specific areas of research, such as the recent document on family research prepared for

the Interagency Panels, would be suitable material for graduate courses.

Discussants noted some apparent trends in graduate training which might increase sensitivity to problems of comparability. Perhaps most significant is the substitution of review articles for the more traditional area examinations, as the qualification for Ph.D. candidacy. This approach may help the student to see the relationship of individual research efforts to a larger pattern of long-term efforts. The group recommended a thorough examination of the function of the key graduate requirements, such as the qualifying examination and the dissertation. For instance, should students be expected to make a unique contribution in graduate level research? Or should they try to fill in a gap within an area of research, even if that were to entail a simple replication?

Another area of concern pertained to the graduate student's access to information. To some extent, the graduate student's knowledge of what is going on in an area of research is contingent on the expertise and involvement of the faculty at that institution. Without access to preprints and other materials exchanged through the informal but often comprehensive communication networks that exist between many researchers, students must depend primarily on published materials, which report research completed much earlier. The discussants emphasized the need to improve the dissemination of unpublished information, including technical reports deposited in agency files, in order to enable graduate students (and all researchers) to study the field in a more systematic way. Similarly, data banks should be open and available to interested researchers. Complaints were expressed that some researchers guard their data too jealously, refusing, even after a reasonable length of time, to share it with other interested researchers who could carry out further analyses.

With regard to the general climate for research within university departments, participants argued that there is a need to modify the existing reward system. The system by which tenure is granted, with its emphasis on the quantity of an individual's research, discourages programmatic and long-term work. Similarly, cooperative research carried out by several investigators generally carries less prestige than do studies with single authorship.

WORKGROUP III

Participants in the Workgroup

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Albert Hastorf, Stanford University

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Judith Siegel, National Institute of Education

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WORKGROUP III
Summary of the Discussion

Moderator: Carol McHale
DHEW/Office of the Assistant Secretary
for Planning and Evaluation

The keynote of discussion in this group highlighted interdependent issues to be addressed:

1. Is comparability in research results a desirable goal and to what degree has it been achieved in research on early childhood and adolescence?

2. Given that there is a problem, can government and the research community work together toward a solution?

3. What are appropriate strategies for doing this?

4. What are appropriate roles for the government and the research community for accomplishing these strategies?

Immediately a question arose as to the goals facilitated by comparability in research. On the one hand will greater comparability allow for more sophisticated conceptual systems, or on the other, more effective social action? The group felt that the use of comparability approaches in research toward applied social policy is more appropriate than that directed toward the basic conceptual systems. When efforts are directed toward development of basic conceptual systems a certain amount of error is expected and tolerated. The same error in development and implementation in applied social policy can result in the loss of huge amounts of money and severe damage to the reputations of the social sciences in the mind of the public. Later on in the group session the developing thought was that comparability related to research

directed to applications is a more appropriate role than in development of basic conceptual systems especially in the initial stages.

The main concern voiced in the opening session of this conference was: how do the social sciences answer to the policy makers in terms of research output and research provided answers. The agency directors, according to one participant, are not interested in comparability per se, rather they ask, "Why don't you have any answers?" And the reason that researchers don't have answers is that the answers are so disparate, so different as to results concerning the same phenomenon that we are reluctant to make a definitive statement. Another participant asked if it would be possible to get some sort of survey on the number and type of questions asked by the policy makers in the legislative and executive branches of government.

One suggested response to this question is to gather together the questions policy makers ask, probably 5 or 6 basic questions which keep recurring. Then gather five or six of the best people you can find on a given issue with five or six consumers of information on that same issue and map the research needed for that issue. The answers which emerge stand the best chance of being the right ones.

The group turned their attention to exploring ways to achieve comparability and the subject of marker variables arose. In the course of the discussion, the group felt that in using marker variables to achieve comparability in basic conceptual systems certain problems emerge. Using as an example the early work on stuttering, one participant recounted that some 30 theories were advanced, most have since fallen by the wayside as research results refuted them. To try to establish definitions and marker variables during this early multi-theory period would be extremely difficult if not futile. The group consensus was that there is a developmental period in a research area during which not enough

is known to specify marker variables to develop common definitions. As fields develop they may become "ripe" for movement toward comparability. Short term memory was suggested as a field which might be appropriate for marker variable inclusion. The characteristics which support this contention are: (1) large number of investigators; (2) relatively similar methodologies and procedures; and (3) a fairly well circumscribed area of investigation.

The chairperson opened a possible area of profitable inquiry, that of process, posing the question: What steps would facilitate decisions on marker variables in the research process?

One basic condition preliminary to the use of marker variables is sufficient knowledge of the phenomenon under study. Without this knowledge no intelligent choice of functional marker variables can be made. One participant observed that the selection of marker variables is allied to predicting the future. One must select those variables which are pertinent to the relating of a present study with a future one. A number of participants voiced the opinion that the people working in a given area are the ones who are best qualified to propose the variables of significance for marker variables. This concern was voiced in the light of mandatory specified marker variables and other dictated procedures summed up in the statement: If comparability means prescription or proscription, it is not a good idea. The Panel members present vehemently responded that this was <u>not</u> the intention of the agencies.

One suggestion was in describing behaviors and procedures in a given study to provide benchmarks for comparability. Another of the participants remarked that it is possible to get significant results with extremely small samples provided the procedures and behaviors are carefully described. He used the work of Piaget and Roger Brown as examples and ventured that these small sample studies produced more knowledge of the structure of language than all of the

hundreds of others that have been done in the area. The major reason is the length of time devoted by those two researchers. To gain insight and understanding the researcher has to stay with it over a period of years. Others cannot replicate the changing conditions nor achieve ecological validity, but with careful study of the interaction of variables and because the conceptual framework is clearly explained and understood, comparison is possible. Unfortunately, the present Federal funding patterns tend to preclude this with the usual one year study or at most the three year study.

The mention of Federal funding patterns gave rise to a new topic. In achieving greater comparatility and generalizability in research a number of problems can be anticipated and from a variety of sources. The participants in the group pointed some of these out. One problem is that of Federal funding patterns. The analogy was made to a "pie" in which 80% may be devoted to directed research and 20% to non-directed, but the entire pie will shrink as long as policy makers see non-edibles emerging from the pie in terms of non-generalizable research results or contradicting ones. In the same fiscal vein, there is a problem with marker variables in the case where the marker variable and its associated measures are so complex and expensive to collect that the main research effort is adversely affected.

The participants turned their discussion to the question of replication and the inherent difficulties. In connection with these difficultires, the importance of the "Joe Moran" factor was mentioned. This factor was concerned with the unique input of unmeasured variables such as an outstanding teacher (i.e., "Joe Moran") which tend to be irreproducible in replicative studies. Replication and comparability also tend to be based on the organizational structure as well as a time sequence. This organizational structure is extremely difficult to reproduce and to explain to others for the purposes of

comparability. Two reasons why comparability is weak are: (1) researchers do not know how to achieve it, or (2) they've forgotten. The first can be ameliorated by graduate programs, the second by "reinforcement of the reinforcers" so that the researcher/professors are reminded of the need for comparability as well.

All in all, the group felt that comparability could assist in fostering replication of significant studies to test reliability and validity of the findings, which is a hallmark of good science whether it be applied or basic research.

Toward the latter part of the session, the group began to explore ways to resolve some of the problems the issue of comparability poses. Some of the suggestions follow.

- One way to enhance comparability and generalizibility in research would be to encourage more articles on the subject in order to call attention to it, especially in the training of graduate students and to remind the established researchers to attend to the same problem.
- The second proposal stated that a multivariate approach to marker variables should be investigated. A thorough multivariate analysis would identify the best estimates as to whether or not marker variables are valid and include measures of them to provide more definition as to those that are truly valid. Those areas of study which can accommodate multivariate analysis are potential ones to examine for marker variable applications.
- The third proposal indicated that although comparability in this conference has explicitly been used to relate research to research, implicitly there is the need for comparability from research to development to evaluation to dissemination to service.

- It was pointed out that translating the conceptual framework of a theoretical system into practical applications is a different type of task than the initial intellectual effort in developing the original framework. It can be facilitated by a highly knowledgeable group of 5 or 6 specialists sitting down to get to delineate the best potential approaches to the problem and then coordinate by their working closely together using a common set of variables over 5 to 7 years. In developing comparability in research a number of participants indicated that directed research on a comparative basis may have to be initiated perhaps on the USDA model of cooperative research.
- Research in the area of instrument development seems to be an important component in furthering comparability via marker variables. For an effective marker variable approach, there has to be reliable, valid instrumentation in the research area and too many areas lack this quality of instrumentation.
- Some consideration was given to the "natural" development of a research area and how this relates to comparability. In fact, some participants felt that "auto-comparability" will occur as a field of study becomes better understood. It tends to be an outcome, but whether it can be incorporated as an input factor to hasten the arrival of the "well understood" condition is unknown. It was suggested that study be devoted to this possibility. In this context, the development of definitions in a field is seen as an aid to aligning results. Definitions tend to clarify distinctions.
- "Maxim: Comparability emerges in a field when the researchers discover what functional variables are important to the field."

On a closing note the group decided that with regard to marker variables as

an approach to comparability, the field has got to arrive at the point where enough is known to determine those variables which are "functioning variables." There is a tremendous amount of social pressure to include those variables which are recognized as having a potentially important impact on the phenomenon under examination. This tends eventually to form a self-correcting mechanism via critiques of the reports generated by research in particular areas, but it must also be ex post facto, perhaps 3 to 5 years based on the publication time lag. When the field is aware of the importance of a particular variable there will be a sort of automatic comparability as people fall into the method of choice that becomes clear in a field. Until that happens it may be dysfunctional to push marker variables and limit the researcher's options to discard non-functional variables by institutionalizing them.

WORKGROUP IV

Participants in the Workgroup

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National Institute of Child Health and Human Development

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Jualynne Dodson, Atlanta University

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Joseph Glick, City University of New York

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WORKGROUP IV
Summary of the Discussion

Moderator: Joseph M. Bobbitt
National Institute of Child Health
and Human Development

If comparability is vital in research, that is, if the results of research study must be potentially comparable with results of other studies or problems, how can this be achieved? The group was asked to address this concern in the context of training the future researchers and from their own perspectives as researchers.

In the general discussion that followed, one immediate response was that for the graduate student, in the development of the conceptual framework of the dissertation, comparability is vital. On one side of the issue, the student must have the skills necessary to make the comparisons and then synthesize. On the other, the research should be so organized and executed that the potential for comparability does actually exist.

A whole range of problems hinders comparability. Comparability based on the use of instruments and methodology tends to suffer over time as new developments or improvements come about and instruments and methodology become outmoded. This is "instrument decay," especially critical in long term longitudinal studies. Actually, the fact that we have a problem of comparability with older studies indicates progress in itself, as was ruefully observed by one participant.

Comparability is an issue of differing magnitude in different disciplines. It was mentioned that additivity of research results is very important in sociology whereas in some areas of psychology it is not seen as a highly critical issue. One of the participants related that anthropology has long attempted to accomplish inter-cultural comparisons from an external viewpoint,

now there seems to be a trend to examine cultures from an internal one. Some of OCD's family studies projects relate to this point. Even though external demographic variables may not aid substantially, if the investigators could collaborate, a more "internal" focus would be initiated. The structures of the projects could be more closely correlated through facilitating comparability. In line with this thought, some of the participants felt that the return would not be worth a great effort to develop a return on the demographic level marker variables. They do not proceed that far along the road to comparability and generalizability that the research is seeking.

As a hypothesis, there may be different levels of comparability, one is on a superficial/demographic level, while the other deeper one is on a conceptual level. This deeper level was perceived as having a greater payoff, although much more difficult to achieve.

The discussion then switched to the process of research and research funding and how this might affect comparability. This need for comparability is observed at policy and legislative levels. One of the Panel members observed that the results of applied research are often needed to answer congressional inquiries and that from this vantage point comparability is indeed critical. Unfortunately the means to determine comparability are scarce on the descriptive level and almost nonexistent on the conceptual level. In moving to address this need among others, a Panel member noted that the basic funding mechanism of the Federal government has been the grant and still is, but as the current trend seems to indicate, the contract will become more and more prevalent. This means the directions and conditions of research will be constrained by the requirements set forth in the RFP (Request for Proposal) and, although the government scientists and research administrators strive to do it right, it remains a difficult task. In response a participant noted that if a marker

variable approach is adopted in toto, to require the "wrong" marker variables would be a terrible mistake and even the "right" ones could have negative side effects. The major danger seen is in concentrating on the tabulation of marker variables at the expense of the real purpose of the investigation.

On the other hand, it was countered, some of the proposals funded by the Panel agencies are lacking in even the demographic level variables which may be superficial in some ways, but still this lack demonstrates a lack of sensitivity to the problem.

Following up on the negative side effects, an example of misuse of marker variables was given concerning a midwestern university which required a specific standardized test for subjects in all doctoral studies. These tests were normally administered by the school districts and the graduate students would get the data from school records. Unfortunately, those children in districts which didn't use the test were excluded from any studies and, unless the doctoral students had the time and funds to do their own test administration, the results were unavailable.

When specific marker variables were discussed, one that received attention was socioeconomic class. SES is related to a wide range of social behavior and differentiates between levels. SES as a marker variable is a very complex variable with perhaps too simple a marker measure. The functional level of this concept is extremely powerful so that even peripheral measures have high correlations. The complexity of the construct shouldn't be judged by the measures used. In fact, the need for research on the variable may be put off by the ease of scoring at least a part of SES with quite simple measures, such as income. If there could be a satisfactory form of measurement it would certainly help explain interstudy differences in results.

To effectively use marker variables for comparison of results, their "moderator" effect must be known. That is to say, the relationship between the phenomenon under investigation and the marker variable must be known, together with any potential interactions. This level of knowledge is directly related to the threshold level of development in a field. The Panel members seem to be in a strategic position to recognize research areas that are at a critical stage of development and "ready" for coordinative meetings.

A suggestion was made to develop a "model" of an area of inquiry and see what descriptors or marker variables could be applied and then test the potential for establishing relationships and the functional ability of that particular set of marker variables. Perhaps the set could be changed and retested. Then if it seems feasible, formulate the field approach and requirements. There could be two levels of marker variables; one at the descriptor level and a second at the conceptual level. The second level is difficult to reach when the theoretical framework of the field is not well developed.

A participant noted that one part of the marker variable approach which may be misleading is the concentration on the individual. When conditions of measurement are varied so are scores. This would indicate that we should look at measurements of environment as critical to comparability as well as measurement of subjects. Marker variables in the ecological setting of the experiment such as sex of experimenter, time of year could be important as marker variables too.

The Panel members voiced an overall request for definitions of what should be supported in the area of comparability and then asked the University participants for backing in such a proposition.

In response, one participant said that the idea is, that while we as researchers endorse the general move toward greater comparability in research, and we endorse the idea of pinpointing, tagging, and highlighting individual

difference variables, such as are implied by socioeconomic status, the age and grade level of the children that are being studied, the race of the subjects and so on, we also have reservations and apprehensions about the trend in that direction if appropriate qualifications and if appropriate correctives are not made. One of the very most important correctives would be to introduce additional monies and additional orientation toward the study of these very individual difference variables that we want to have highlighted, that we want to use as markers. There has to be an investment in the study of individual differences among the subjects whose behavior or other attributes are explored, and there has to be further study of the technology, the tests, or whatever the measures are, that are used in these studies. So that, for example, although the cover sheet of an application might say the WISC is going to be used, there should also be some investment on the part of the researcher and on the part of the agency that's going to support the research to further explore the nature of that Wechsler test, and the ways in which individual difference attributes come into play in performance on that test.

As the discussion turned to the actual use of marker variables in research and the group talked about when and how marker variables could be used, the group felt that there seems to be a threshold level in the development of a field before it is intellectually profitable to sit down together to delineate the commonalities in a research field. The researchers working on the psychophysiology of sleep were ready to do that and were able to develop common definitions and commonly understood methodological approaches.

Meetings of researchers have been effective in bringing some cross-fertilization of techniques and methodology. A question arises as to how well this means can operate at the conceptual level and with theoretical issues. Too heavy a concentration on marker variables can have unfortunate consequences in

that more problems will arise than are solved. The over concentration on methodology will obscure the substantive questions, especially in the absence of a theoretical or conceptual framework. There is a problem in the instance where comparability becomes of such paramount concern that creativity is stifled. Marker variables and comparability should not be seen as an end in itself, but as a facilitating mechanism toward achieving more productive consequences from research.

The starting level for comparability in the more applied research levels or in evaluative research should probably be at the local level and build upward rather than at national level and be reflected downward. In this, the group felt that it would be helpful in a dissemination effort to have the Social Research Group supply papers for distribution to the participants of seminars held at and by the universities for graduate students and faculty. This help would be even more appreciated if a staff member or Panel member could act as a resource person at regional meetings hosted by a university.

Although the participants felt that long-term change could be achieved via graduate school training, a more immediate impact would be seen if the active researchers were addressed. It was noted that very few of the graduating Ph.D.s will become active researchers.

There was a feeling among the university representatives that funds should be available to coordinate research and to involve the researchers themselves in this coordination. In this effort, "face to face" coordination should take place. In conjunction with this, data exchange would be a good thing. Let one investigator have a small grant to analyze the data of a second investigator from a different perspective and better yet, get the two of them together in direct contact to discuss the differences and similarities within their respective analytical frameworks. One drawback to the exchange of data especially when the

work is done at different points in time, is that extensive record keeping of data becomes not only time consuming, but is affected by other factors such as invasion of privacy concerns and the resultant safeguarding and constraints on release of sensitive information. As another source of data for comparability estimates, the final reports of Federally funded projects are more likely to have information for comparability than the information in the literature. These reports should be in a repository and available to the research community.

As a final note, the group also suggested that conferences on the issues in training graduate students would be worthwhile for a number of reasons in addition to comparability.

REFLECTIONS ON THE CONFERENCE

Upon returning to their universities, many of the Conference participants wrote letters to the Panels expressing afterthoughts and suggestions concerning comparability in research. Excerpts from some of these letters are presented below, in the hope that they might stimulate consideration of issues beyond those raised in the Conference. The Panels would continue to welcome other reactions and ideas both from those who participated in the Conference and from those who read these proceedings. Letters could be addressed to the Panels through the Social Research Group, G.W.U., 2401 Virginia Avenue, N.W., 20037. By providing input in this way, researchers in the field could guide the Panels in their efforts to increase comparability in research, and in turn could benefit from the general exchange of ideas and information that might result.

- The issue of cumulative research is certainly an important one, and I was happy to be part of a group considering it. Another series of groups composed of individuals with common substantive research interests should be able to go beyond agreeing in principle that the problem of comparability is a real one and begin to make some more concrete suggestions as to vital demographic variables and potential marker variables.

  --Kathleen M. White
  Boston University

- I am at this time negotiating with the Graduate School to ascertain a date and the possibility of a conference here on campus. It would be delightful to have you and/or one of the project group to discuss the matter of comparability as it might exist on campus as well as on the national scene.

  --Rosemarie E. McCartin
  University of Washington

- Throughout both conferences I have attended, the comparability issues have been discussed in relation to proposals. From looking at the guidelines for submitting a Final Report to OCD, much comparability could be achieved if the guidelines were to include the

comparability issues. That way, all Final Reports of research submitted to federal agencies would include comparability data. Were Final Reports to include the description of "marker variables and measures", however defined, it would increase the Government's ability to synthesize, utilize, and just know what it knows on a given research topic.

--Jualynne Dodson
Atlanta University

- Just a note to say that I found the recent conference on research comparability very interesting and instructive. While I developed a renewed respect for the necessity of achieving some generalizability of findings, I became more appreciative as well of some of the possible scientific dangers involved in becoming obsessively concerned with comparability and the inclusion of marker variables. I think, for example, that the National Collaborative Perinatal Project tried to achieve comparability (with only limited success in some areas, incidentally) across 14 institutions in their respective psychological, pediatric and other assessments, quite possibly to the detriment of other investments that should have been made in the study and in the study population at that time.

--Lewis Lipsitt
Brown University

- 1. I got a rather schizophrenic feeling. For several years we have been hearing with increasing clarity messages from people like Bruner, Bronfenbrenner, Cole and myself that ecological factors are of profound importance in development and that moreover the ecology of the experimental situation is often a major determinant of tested levels and styles of functioning. Accordingly, a proposal to establish comparability on the basis of demographic factors in the main runs counter to that view and seems to be somewhat regressive.

  2. Similarly, there has been increasing understanding that standard tests are not so standard as they are administered in different ecologies and to different cultural groups. Thus, the second aspect of comparability is open to question on the same grounds as the first.

  3. Neither of the above points argues against the attempt to establish comparability, but they do argue for the complexity of the issue. It seems clear that marker variables should themselves be made objects of questioning rather than being assumed as known from the outset. The problem is not simple description, since each description functions like a theory of what is important in accounting for the event.

  4. In order to make some headway I think that two major efforts would be called for--either of which I would be glad to be involved in. First, there should be conferences (not necessarily elite) about the psychological or descriptive meaningfulness of those marker variables currently offered for sale. Similarly there should be conferences

devoted to an attempt to develop a descriptive typology of experimental environments and data sources so as to give a balanced "marking" of the various research efforts considered for comparability.

All of the above presumes that the issue is, in fact, a research issue and that, accordingly, the best description of the comparability or non-comparability of experiments, etc. is in fact best for the purpose at hand. However, none of the above makes sense if the effort is a strategy of the research community to adapt itself to the categories of decision makers without a corresponding attempt to alter those categories. I believe that it would ultimately be irresponsible and counterproductive to adopt categories that we know to be false in order to save our funding skins. Hence, I hope that we are on the same side in wanting to see some intellectually defensible set of markers established that reflect current thinking in the field. To do so would involve a commitment to study the issue and to establish markers relevant to both subjects and situations.

--Joseph Glick
City University of New York

- I want to endorse the idea that people from Washington go out to universities to give talks or seminars on comparability. This is an excellent way to get the message directly to graduate students and faculty. It also provides students and faculty a chance to meet informally with someone from the Washington scene and learn about the agency's perspective, plans, and programs. . . .

I urge you to consider the possibility of more extended conferences. Probably something like summer conferences of 3-6 weeks, located at some retreat-like setting, where work sessions and day-to-day contact would be maintained. There are examples of this vehicle in psychology and developmental psychology. Several private foundations and governmental agencies have supported these conferences. I can see the content and participants forming in several different directions. One could be a "boulder-like" conference on training in developmental psychology. . . .

Another possibility would be a conference on the topic of comparability of research. Participants could be researchers and directors of training programs in human development. Presumably a volume reporting the conference papers would emerge from the summer.

A third possibility would be a summer institute on comparability of research. In this format, advanced graduate students and recent doctorates would be selected to attend the institute and a faculty would be assembled to teach 5 or 6 week courses on the topic. The faculty should include government and university people.

I believe that the USDA model of extension centers on various agricultural campuses to be a model worthy of serious study. One does not want to stop using current methods of supporting research and

training. However, I am convinced that supporting centers in the USDA manner at certain places could have enormous long-range benefits for social policy, applied and demonstration research, basic research and theory, and training. I should think that centers at widely dispersed locations, building upon local pools of talent, could work very well. Centers could be established in states such as: California, Minnesota, New York, Georgia, North Carolina, Texas, and Illinois. Using a university base in each state and grafting the center onto existing programs and personnel, yet maintaining the fundamental nature of the USDA model.

--Martin Manosevitz
University of Texas at Austin

FOLLOW-ON ACTIVITIES

Participants:

You may wish to know what the Interagency Panels have been doing since the Conference, besides organzing the Proceedings. A number of things have happened.

The Panels have had the topic on each of their meeting agenda for June, July, and August. The discussions have been on what actions should be taken and what forms the actions should take to assure a continued thrust on the comparability, cumulative data/knowledge issues. From these discussions a consensus was reached that the issue of comparability and cumulative data/knowledge must continually be seen in the larger context of social policy and relevant research. Comparability is one sub-facet of the entire scope of research addressing social policy concerns. And, further, comparability problems can only be addressed depending on the state-of-the-art of a particular concept, variable clarity and measurement. Many of you pointed some of these things out during the conference and in your subsequent letters to us.

As a result of the Panels' discussions, a paper was commissioned to Richard Bell. His paper became a discussion and work paper for Panel meetings and the model he presented was adopted, as modified, by both Panels. The adopted model is included in the Proceedings for your examination. It has become a guide for us and places research activities, including comparability and data/knowledge issues, in proper perspective.

Presently, the Panels are determining which broad policy issues they wish to address on an interagency basis. Once these are selected, the Bell model will guide areas of action and discussion. One of these, you note, is a meeting of consumers and researchers to identify research questions appro-

priate for addressing the social policy. A State has already expressed a desire to use the entire State as a consumer of research and is interested in addressing research needs to carry out the social policy. Another area is that of comparability and cumulative data/knowledge. Here, again, meetings will be held to discuss the state-of-the-art and needed actions. The Panels will use the data base of current research supported by the Federal Government for identifying research relevant to selected social policy areas and to analyze that research in terms of its status for further action, including comparability and cumulative data/knowledge actions.

We are also responding to your requests to make presentations at your institutions. And we look forward to a continuing relationship with you, either as an entire group or as individuals particularly expert and/or interested in research on the social policy areas selected by the Panels. We will keep you informed.

Edith H. Grotberg, Ph.D.
Chairperson
August 1975

WORKING PAPER: SYNTHESIS OF TOPICS FROM FIRST AND SECOND CONFERENCES ON COMPARABILITY IN RESEARCH

Sponsored by the Interagency Panels on Research
and Development in Early Childhood and Adolescence

Prepared by Richard Q. Bell

June 1975

This effort will confine itself to comments or suggestions that appeared in the transcripts of two or more subgroups at the conferences. First of all, the conferees repeatedly accepted the necessity of addressing research to pressing policy issues with which federal, state and other agencies, and the general public are concerned. There was no doubt but that the research establishment should (1) organize itself to produce answers to researchable questions entailed by these policy issues, and (2) assure that progress on researchable issues is achieved in a reasonable time relative to the urgency of the public need.

Second, it was recommended that Consumer-Researcher Groups be organized to acquaint scientists with the nature of the problems involved in a policy question, and reciprocally, to communicate to consumer groups (representatives of agencies, or public groups that bear the brunt of the problems involved), the kind of assistance that may or may not be feasible in research.

A third recommendation was that there be Research Progress Monitoring Groups that would be responsible for keeping track of research relevant to certain key areas to determine whether reasonable progress has been made, or whether a number of approaches should be used to stimulate and facilitate the research.

A fourth recommendation was that several kinds of conferences for researchers be organized, ranging from those intended to work on conceptual problems (so as to produce better definitions in an area), through to conferences of potential collaborators having common research interests, to groups which have reached a stage where they could standardize the collection of demographic information and develop marker variables. All of these

efforts were intended to provide for a more cumulative effect of individual research efforts.

A fifth recommendation was that submission to scientific journals be accompanied by more complete descriptions of subjects, tests and procedures, and the setting, than would normally be published because of limitations of journal space. This supplementary descriptive material (needed in order to tie results from different projects together) should be deposited in central data banks where it could be accessible to interested researchers.

All of these recommendations could be integrated in a tripartite structure of interrelated groups designed to translate policy questions into research questions, and attain answers to these questions as quickly as possible

The first need in putting such a structure into effect, is for the Interagency Panels to collate and integrate policy questions submitted by agencies. The policy questions could come out of such problem areas as family breakdown, day care, violence in schools, runaway children, and child abuse. These policy questions could be addressed by Consumer-Researcher Groups which would be convened to explore various aspects and ramifications of the problem, to bring to bear the widest possible range of viewpoints, and open up as many research possibilities as possible. The Consumer-Researcher Groups might meet once or several times but would be considered to have discharged their function when they had outlined the aspects of the problem for which research of various kinds might be helpful, whether it be action-oriented research, evaluation research, or basic research designed to produce new information. Their recommendations would lead in some cases to the establishment of Research Progress Monitoring Groups. These groups would consist of experts in research for that area, who had

a vital interest in obtaining answers to the questions raised by the Consumer-Researcher Groups, whether the questions lay in the areas of (1) action programs, (2) evaluation, or (3) obtaining new information. Thus, three different kinds of Research Progress Monitoring Groups could be seen. All of these groups would be continuing in nature and have long-term responsibilities relative to obtaining answers to the research questions that led to the creation of the group. They would be responsible for periodic progress reports.

The operation of one of the three kinds of Research Progress Monitoring Groups could be projected by way of illustration. One intended to yield new research information could determine that progress in the area was sufficient without further stimulus to the field, and could discharge their function with periodic reports on results, and how they bore on the policy questions. On the other hand, it might determine that there was a need for better demographic information, and request the cooperation of journal editors and others in obtaining information for a data bank that they would maintain. Alternatively, or in addition, it might be determined that the key need in this particular field at a given time was for conferences drawing together leading researchers, to assist them in clarifying concepts, and in developing better theory. They could determine that research in the area had reached a point at which it was very important that there be a variety of studies attempting to check out the same or related findings; thus, they could encourage collaborative research involving a small number of investigators pursuing the same topics, and interested in working together. They might conclude that, because of insufficient use of marker variables, it was not possible to synthesize the results of studies that had been carried out in the research area they were monitoring. Accordingly, they could recommend

to agencies or specific groups of agencies that investigators be brought together to survey their area of research with the objective of developing marker variables as well as means of measuring them.

The purpose of the foregoing structure would be to provide a more certain linkage of research efforts to public policy questions, but not to replace research support for investigators who submit requests under the open submission categories existing in many agencies and foundations. This schema carries no implications for a shift of research support away from basic science. It is recognized that a great deal of progress in meeting public needs results from the efforts of individual scientists who themselves select what they consider to be the important problems and determine for themselves how to pursue them. Rather, the structure of these groups presently being recommended would be intended to prevent the kind of situation that Urie Bronfenbrenner has brought to the attention of investigators in developmental psychology in editorials and speeches at conventions. Bronfenbrenner has simply pointed out that very little research has been carried out on some policy questions because of a lack of interest on the part of qualified scientists, or because the structure of their research system is such that there are no rewards to the investigators in pursuing answers to these public policy questions. In short, the purpose of the structure of research groups would be to insure that reasonable progress (of the kind that agencies, congressmen, and the public have a right to expect), will be forthcoming from the research establishment in return for the general support of research on human development.

It is clear that parts of the flow chart, from agency policy questions through to the convening of expert groups, are already in effect in some areas and for some problems. The idea of the Research Monitoring Groups is one of the more novel elements in the scheme. The main utility of the flow

chart is that it organizes a number of recommendations that have been made by very knowledgeable investigators that had been convened by the Interagency Panels. A large number of specific recommendations that can otherwise be treated only as a laundry list, find a place within this framework. The structure is also responsive to the repeated recommendation that solutions to research problems be pursued by area and that very general recommendations, whether they are concerned with better reporting of demographic variables or more use of collaborative research, could be inappropriate for some research areas at best, or stultifying and counter-productive at the worst. Thus, this effort to integrate the high-frequency recommendations of the conferees places a responsibility for determing appropriate action in the hands of a group of research experts who would know better than anyone else what approaches are needed, and how a number of these approaches might have to be adapted for that particular area of research.

ORGANIZATION OF AGENCY FUNCTIONS, CONSUMER AND RESEARCH GROUPS

1 - Agencies and Interagency Panels

Development and statement of policy questions and problem areas

Examples:

Child Abuse Runaways Developmental Continuity

2 - Consumer-Researcher Groups

Defining the problem and all its ramifications and aspects for which research may provide answers

3 - Research Progress Monitoring Groups

Specific formulation of the research questions, reviews of literature; determination of whether research progress is sufficient; recommendations to alter the pattern of research where necessary, such as:

Examples:

Commission efforts of individual scientists to synthesize research

Convene groups of experts to assist concept development, better definitions

Organize interested investigators into collaborative projects

Sponsor groups to select lists of descriptors that are recommended for specific research areas

Sponsor groups of researchers who wish to develop marker variables and measures

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